

ABSTRACT

5 A method for making modified poly(ethylene oxide) by graft polymerizing thereto organic monomers containing a trialkoxy silane functional group or a moiety that reacts with water to form a silanol group, such as methacryloxypropyl trimethoxy silane, onto the poly(ethylene oxide) is disclosed. The graft polymerization is accomplished by mixing the poly(ethylene oxide), the silane-containing monomer(s) and an initiator and applying heat. Preferably, the method is a reactive-extrusion process. After graft polymerization, the modified poly(ethylene oxide) may be exposed or subjected to relatively high moisture conditions, thereby causing crosslinking and formation of a structure that is capable of absorbing relatively large amounts of saline. The resulting modified poly(ethylene oxide) has improved properties over articles similarly processed from unmodified poly(ethylene oxide).

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